

***Appendix B***  
***Visual Resources Methodology, Visual Simulations and***  
***KOP Worksheets***



## ***Visual Resources Methodology***

### **Scenic Quality/Visual Integrity Inventory**

The Scenic Quality Inventory and the Visual Integrity Inventory are both implemented to determine the overall Scenic Value of the landscape (Scenic Quality Class). Each inventory method is completed independently because natural occurring landscapes and urban landscapes are very different in character. The Scenic Quality Inventory focuses on features that occur naturally in the landscape (e.g., all areas outside the city limits of Henderson and Boulder City). The Visual Integrity Inventory focuses on human created features and their contribution/detraction from the landscape (all areas within the city limits of Henderson and Boulder City). Scenic Quality is illustrated on Maps 5 and 6 in Appendix A.

### **Scenic Quality**

The purpose of the Scenic Quality Inventory is to establish a consistent database describing the inherent scenic values of the natural landscape. The inventory began by examining the region's physiography. A review of Fenneman's Physiography of the Western United States (1931) and other related literature was used to determine the general landscape character within the plan area. This information was further divided into smaller units of relatively homogeneous physiographic and visual characteristics. Each unit was evaluated based on the following key elements:

- Landform
- Vegetation
- Water
- Color
- Influence of adjacent scenery
- Scarcity
- Intactness
- Cultural modification (manmade changes)
- Ephemeral and non-visual conditions

The analysis used for developed areas is referred to as Visual Integrity, which is a measure of the scenic values of human developed landscapes and the degree to which the area is perceived to be "complete" or unified. The highest visual integrity ratings were given to those developed landscapes that have little or no deviation from the predominant surrounding character. This information was further divided into smaller units of relatively similar visual characteristics. Each unit was evaluated based on the following key elements:

- Land use development pattern
- Water
- Vegetation
- Color
- Influence of adjacent scenery

## Appendices

- Scarcity
- Intactness
- Architectural and landscape elements
- Ephemeral and non-visual conditions

Table B-1 shows a side-by-side comparison for the Scenic Quality Inventory/Visual Integrity Inventory. Numerical values are used to rate each key element. The sum of these values determines the Scenic Quality Class.

### ***Scenic Quality Class***

Once each key element is scored from both the Scenic Quality Inventory and the Visual Integrity Inventory, the sum of each unit is used to determine the resulting scenic quality class (see bottom of Table B-1). Once completed, they were carried forward and used in the visual analysis (refer to Chapter 4). Table B-1 describes in a side-by-side comparison the Scenic Quality Classes derived from the inventory. Scenic Quality Classes are illustrated on Maps 5 and 6 in Appendix A.

## **Viewer Sensitivity Inventory**

The Viewer Sensitivity Inventory documents those areas where viewers could have a concern for changes to the landscape. Three components comprise the viewer sensitivity inventory: visual sensitivity, seen areas/visibility thresholds, and viewpoints.

### **Visual Sensitivity**

Visual sensitivity is a measure of viewer concern for change to the landscape. Visual sensitivity is evaluated and documented based on public meetings, discussions with agency officials, review of existing agency information and borrows from the methods outlined on the BLM VRM 8400 System as a guideline, but was modified to address urban related viewpoints. Visual Sensitivity Criteria is shown on Table B-2.

Table B-3 illustrates the combinations of the criteria and the resulting visual sensitivity level by defining the process for assessing visual sensitivity levels. For example, to obtain a “high” visual sensitivity level user attitude could be “high”, duration of view could be “moderate” and use volume could be “low”. Combining these individual criterions would result in a “high” visual sensitivity level. Results of the visual sensitivity were reviewed, refined and carried forward into the visual analysis (refer to Chapter 4).

### **Seen Areas/ Visibility Thresholds**

Seen area mapping or viewshed mapping, is a computer-derived analysis showing areas that are visible from inventoried viewpoints. A GIS analysis is conducted that uses point, line or polygon information attributed to sensitive viewers and KOPs. The results of the analysis are verified through site visits and other overlay mapping to account for such features as vegetation and localized conditions. The result is a detailed map showing areas visible from inventoried viewpoints and KOPs.

Visibility thresholds are established zones of visual perception. Essentially, form, line, color and textures are perceived differently with increasing distance from a viewpoint. With increase in distance, changes in the landscape become less obvious and perception of detail is diminished. Elements of form and line become more dominate than color or texture. The visibility thresholds are defined as follows:

- Proximate Visibility Threshold (0 to 0.25 miles) – The zone where fine details are obvious. Texture and color are vivid and clear. New features such as transmission lines would dominate the view.
- High Visibility Threshold (0.25 to 0.75 miles) – This is the threshold where changes in the landscape might be viewed in less detail. Texture, form and other aesthetic qualities of vegetation are normally perceived in this zone. Fine details diminish.
- High to Moderate Visibility Threshold (0.75 to 1.5 miles) – This zone is where details of foliage and fine textures cease to be perceptible and small features begin to appear as outlines or patterns.
- Moderate Visibility Threshold (1.5 to 3.0 miles) – At this threshold, texture and color are diminished with form and line becoming the most obvious.
- Low Visibility Threshold (3.0 to 6.0 miles) – In this zone, elements of the landscape are represented as outlines. Form and line are most obvious. Colors are diminished in most cases due to atmospheric haze and appear washed out or muted.

## Viewpoints

Potentially sensitive viewpoints are identified and inventoried within the six-mile-wide plan area. Identification of these viewpoints include aerial mapping (March 2001), discussions with agency officials, review of land use data (existing and proposed), and field reconnaissance. The inventory includes the following types of viewpoints:

- Residence – single-family and multi-family dwellings
- Planned land use – residential developments with preliminary plat approval and proposed institutional facilities
- Parks and recreation areas – recreation trails, parks, day-use areas, picnic areas, golf courses and other public use areas
- Travel routes – interstates, highways and recreation destination roads
- Cultural sites – National Register Eligible sites or districts or culturally sensitive areas where changes to the landscape could impact the integrity of the site

Sensitive locations that are identified as representative viewpoints are termed Key Observation Points (KOPs). Refer to chapter four for a description of these KOPs

## BLM Visual Resource Management (VRM) Inventory

The purpose of the VRM inventory is to document compatibility with those areas owned and administered by the BLM. VRM classes define the acceptable degree of visual change permitted in the natural landscape on BLM lands. This information is derived from three visual resource inventory components: scenic quality, visual sensitivity and visibility/distance from sensitive viewpoints. The BLM uses four VRM classes to manage visual resources on their lands. Table B-4 describes each VRM Class.

# Appendices

**Table B-1 Scenic Quality/ Visual Integrity Evaluation**

SCENIC QUALITY INVENTORY AND EVALUATION CRITERIA							VISUAL INTEGRITY INVENTORY AND EVALUATION CRITERIA						
Key Elements	RATING CRITERIA and SCORE						Key ELEMENT	RATING CRITERIA and SCORE					
Landform	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops, or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing such as glaciers.	5	Steep canyons, mesas, buttes, and drumlins; or interesting erosional patterns or variety in size and shape of landforms; or detail features present and interesting though not dominate or exceptional.	3	Low, rolling hills, foothills or flat valley bottoms, interesting detail landscape features few or lacking.	1	Land Use Development Pattern	Excellent arrangements of forms that compliment each other.	5	Some spatial harmony exists.	3	Many discordant elements present.	1
Vegetation	A variety of vegetative types as expressed in interesting forms, texture, and patterns.	5	Some variety of vegetation, but only one or two major types.	3	Little or no variety or contrast in vegetation.	1	Vegetation	A variety of vegetative types as expressed in interesting forms, texture, and patterns.	5	Some variety of vegetation, but only one or two major types.	3	Little or no variety or contrast in vegetation.	1
Water	Clear and clean appearing, still or cascading white water, any of which are a dominant factor in the landscape.	5	Flowing, or still, but not dominate in the landscape.	3	Absent, or present, but not noticeable.	0	Water	Clear and clean appearing, still or cascading white water, any of which are a dominant factor in the setting.	5	Flowing, or still, but not dominant in the setting.	3	Absent, or present, but not noticeable.	0
Color	Rich color combinations, variety or vivid color; or pleasing contrasts in the soil, rock, vegetation, water or snow fields.	5	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element.	3	Subtle color variations contrast or interest; generally mute tones.	1	Color	Rich color combinations in land uses and architectural elements, variety or vivid color; or pleasing contrast in the soils, rock, landscaping, roof and building colors, signs, and roadways.	5	Some variety in land uses and architectural elements, contrasts in the soils, rock, landscaping, roof and building colors, signs, and roadways.	3	Discordant color contrasts in the soils, rock, landscaping, roof and building colors, signs, and roadways.	1
Influence of Adjacent Scenery	Adjacent scenery greatly enhances visual quality.	5	Adjacent scenery moderately enhances overall visual quality.	3	Adjacent scenery has little or no influence on overall visual quality.	0	Influence of Adjacent Scenery	Adjacent scenery greatly enhances visual quality.	5	Adjacent scenery moderately enhances overall visual quality.	3	Adjacent scenery has little or no influence on overall visual quality.	0
Scarcity	One of a kind; or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing, etc.	5+	Distinctive, though somewhat similar to others within the region.	3	Interesting within its setting, but fairly common within the region.	1	Scarcity	One of a kind; or unusually memorable, or very rare within region.	5	Distinctive, though somewhat similar to others within the region.	3	Interesting within its setting, but fairly common within the region.	1
Intactness	Entire character uncompromised by external intrusions.	5	Some deviations from existing character.	3	Many discordant elements present. Aesthetic appeal is compromised.	1	Intactness	Entire character uncompromised by external intrusions.	5	Some deviations from existing character.	3	Many discordant elements present. Aesthetic appeal is compromised.	0
Cultural Modifications	Free from aesthetically undesirable or discordant sights and influences; or modifications add favorably to visual variety.	2	Scenic quality is somewhat depreciated by inharmonious intrusions, but not so extensive that the scenic qualities are entirely negated or modifications add little or no visual.	0	Modifications are so extensive that scenic qualities are for the most part nullified or substantially reduced.	-4	Architectural and Landscape Elements	Architecture, landscaping, development, and land uses add favorably to visual variety while promoting visual harmony.	5	Land uses and developed areas add little or no visual variety to the area, and introduce some discordant elements.	3	Land uses and developed areas add little or no visual variety to the area, and introduce some discordant elements.	1
Ephemeral and Non-Visual Conditions	Frequent wildlife sightings, many natural sounds present.	5	Occasional wildlife sighting and natural sounds present.	3	Both wildlife and natural sounds are not present. Some distant urban noise.	1	Ephemeral and Non-Visual Conditions	Sights and sounds of the community or area add to the character of the area.	5	Sights and sounds somewhat detract from the character of the area.	3	Sights and sounds detract strongly and promote disharmony.	1
SCENIC QUALITY CLASS: A = 25 or more, B = 24 to 18, C = 17 or less							SCENIC QUALITY CLASS: A = 27 or more, B = 26 to 20, C = 19 or less.						

**Table B-2 Visual Sensitivity Criteria**

Criteria	High	Moderate	Low
Use Volume	High level of use	Moderate level of use	Low level of use
User Attitude	High expectations for maintaining scenic quality/visual integrity (i.e. residences, recreation areas, scenic byways)	Users are concerned for scenic quality/visual integrity but are not the main focus of their experience. (i.e. golf courses, urban trails)	Areas where the public has low expectations for maintaining scenic integrity. Generally commercial, industrial areas where human caused modifications already exist in the landscape
Duration of View	Fixed or contiguous views (e.g. residences, developed recreation sites, etc.)	Intermediate views (e.g., waysides, overlooks, rest areas, open highway views)	Brief or intermittent views (e.g., highway/interstate views in rolling landscapes)

**Table B-3 Visual Sensitivity Matrix**

User Attitude	Duration of View	Use Volume	Visual Sensitivity Level
High +	Long +	High =	High
High +	Moderate +	Moderate =	High
High +	Moderate +	Low =	High
Low +	Short +	High =	Moderate
Moderate +	Moderate +	High =	Moderate
Moderate +	Moderate +	Moderate =	Moderate
Low +	Moderate +	Moderate =	Moderate
Moderate +	Short +	Low =	Low
Low +	Short +	Low =	Low

## Appendices

**Table B-4      Visual Resource Management Classes (VRM Classes)**

<b>Class I</b>	This class provides primarily for natural ecological changes; however, it does not preclude very limited activity. Any contrast created within the characteristic environment must not attract attention (requires congressional designation, none occur within plan area).
<b>Class II</b>	Changes in any of the basic elements (form, line, color and texture) caused by a management activity should not be evident in the characteristic landscape. A contrast may be seen but should not be evident or attract attention in the characteristic landscape.
<b>Class III</b>	Contrasts to the basic elements (form, line, color, texture) caused by a management activity may be evident and begin to attract attention in the characteristic landscape. However, the changes should remain subordinate to the existing characteristic landscape.
<b>Class IV</b>	Contrasts may attract attention and be a dominant feature in the landscape in terms of scale; however, the change should repeat the basic elements (form, line, color, texture) inherent in the characteristic landscape.

## Photo Simulations

Important views and areas where issues of potential visual impacts were of high concern were further evaluated using photographic simulation techniques. These views are referred to as Key Observation Points (KOPs). Simulations were used to evaluate the accuracy of the predicted visual impacts, to determine the effectiveness of recommended mitigation, and to illustrate the expected impacts to the concerned agencies and the public. The viewpoints (KOPs) from the simulations that were prepared include:

- KOP 1: Views looking northeast at mile 2.5 from motorists traveling I-15 northbound
- KOP 2: Views looking west near mile 26.5 from Lake Las Vegas Resort
- KOP 3: Views looking south at mile 28 from residential viewpoints within Calico Ridge subdivision
- KOP 4: Views looking east at mile 29.5 from Henderson rural residential viewpoints near Racetrack Road
- KOP 5: Views looking southwest at mile 2.5 from motorists traveling I-15 southbound
- KOP 6: Views looking southeast at mile 35 from motorists traveling US 93 southbound
- KOP 7: Views looking northwest at mile 35 from motorists traveling US 93 northbound
- KOP 8: Views looking south at mile 44 from motorists traveling US 95 southbound
- KOP 9: Views looking north at mile 44 from motorists traveling US 95 northbound



## ***Insert Visual Simulations***



## ***KOP VISUAL CONTRAST RATING WORKSHEETS***



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**VISUAL CONTRAST RATING WORKSHEET**

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

**SECTION A. PROJECT INFORMATION**

<b>1. Project Name</b> Harry Allen – Mead 500kV	<b>4. Location</b> Township _____ Range _____ Section _____	<b>5. Location Sketch</b> see KOP 1 simulation
<b>2. Key Observation Point</b> 1		
<b>3. VRM Class</b> III		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
<b>FORM</b>	Flat and open terrain	Simple and patchy	Vertical transmission lines accentuate liner lines elsewhere
<b>LINE</b>	Horizontal with some linear accents	Very slight protrusions above horizontal plane	Vertical as well as horizontal along conductors (wires)
<b>COLOR</b>	Brown and khaki with modeled appearance	Light browns and faded green	Rust brown with gray in distance
<b>TEX- TURE</b>	Semi-course	Course with slight smooth elements throughout	Some smooth, others course

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
<b>FORM</b>	See B-1 above	See B-2 above	Vertical and linear form is pronounced. Proposed activity is somewhat noticeable
<b>LINE</b>			Linear and horizontal become bisected perpendicularly
<b>COLOR</b>			New introduction of gray and silver
<b>TEX- TURE</b>	↓	↓	Complex structure results in a course texture

**SECTION D. CONTRAST RATING    ☐ SHORT TERM    ☒ LONG TERM**

<b>DEGREE OF CONTRAST</b>		<b>FEATURES</b>												<b>2. Does project design meet visual resource management objectives?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		<b>LAND/WATER BODY (1)</b>				<b>VEGETATION (2)</b>				<b>STRUCTURES (3)</b>					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	<b>3. Additional mitigating measures recommended</b>  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reserve side)	
<b>ELEMENTS</b>	<b>Form</b>				x				x		x				
	<b>Line</b>				x				x			x		<b>Evaluator's Names      Date</b> Thomas Dildine Power Engineers, Inc. 9/13/03	
	<b>Color</b>				x				x			x			
	<b>Texture</b>				x				x			x			

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Section D. (continued)

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Comments from item 2.

The characteristic landscape would be altered as a result of the proposed action. This alteration however, is not an introduced form or line not already seen throughout the characteristic landscape.

A casual viewer's attention is already drawn and focused to multiple 230 and 345kV corridor nearby.

The proposed action would not be a new element introduced that would be out of context with the surrounding visual condition.

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Additional Mitigating Measures (See item 3)

Application of visual-1 and visual-5 mitigation measures outlined in Table 4-5 of EA.

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**VISUAL CONTRAST RATING WORKSHEET**

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

**SECTION A. PROJECT INFORMATION**

1. Project Name Harry Allen – Mead 500kV	4. Location	5. Location Sketch see KOP 2 simulation
2. Key Observation Point 2	Township _____	
3. VRM Class III	Range _____	
	Section _____	

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Gently sloping terrain with foothill backdrop	Gentle to abrupt rolling ground plane	Terraced residential housing, two large transmission lines
LINE	Some horizontal with frequent vertical spires that interrupt	Terraced horizontal edges with vertical protrusions of palm trees	Linear focus of transmission line. Several vertical towers. Housing creates horizontal lines.
COLOR	Brown and olive. Blue water	Vibrant green and some browns	Gray and silver to earth tone stucco
TEX- TURE	Smooth water to course and sharp topography	Smooth and round to course and complex	Course and complex

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	See B-1 above	See B-2 above	Incremental change from two to three large Rows of structures
LINE			Slightly more evident linear and vertical towers
COLOR			See B-3 above
TEX- TURE	↓	↓	See B-3 above

**SECTION D. CONTRAST RATING    ☐ SHORT TERM    ☒ LONG TERM**

DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
ELEMENTS	Form				x				x			x		3. Additional mitigating measures recommended  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reserve side)	
	Line				x				x			x			
	Color				x				x			x			
	Texture				x				x			x			
<div style="display: flex; justify-content: space-between;"> <span>Evaluator's Names Thomas Dildine Power Engineers, Inc. 9/13/03</span> <span>Date</span> </div>															

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Section D. (continued)

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Comments from item 2.

The characteristic landscape would be altered as a result of the proposed action. This alteration however, is not an introduced form or line not already seen throughout the characteristic landscape.

The simulation shows the effectiveness of lattice tower placement in front of complex topography nearby. The topography behind the lattice towers forms a backdrop that makes the structures less visible.

A casual viewer's attention is already drawn and focused to multiple 500kV corridors immediately adjacent.

The proposed action would not be a new element introduced that would be out of context with the surrounding visual condition.

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Additional Mitigating Measures (See item 3)

Application of visual-2, 3, and 4 mitigation measures outlined in Table 4-5 of EA. Measures 2 and 3 are selected at the request of local landowners nearby.

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
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**VISUAL CONTRAST RATING WORKSHEET**

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

**SECTION A. PROJECT INFORMATION**

1. Project Name <b>Harry Allen – Mead 500kV</b>	4. Location	5. Location Sketch see KOP 3 simulation
2. Key Observation Point <b>3</b>	Township _____	
3. VRM Class <b>non-BLM land</b>	Range _____	
	Section _____	

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Rolling and sloping foothills	Mounded tufts to vertical and globular plantings	Mild diagonal forms with other prominent vertical poles and towers
LINE	Diagonal and horizontal	Vertical diagonal and some horizontal	Vertical towers with horizontal conductors
COLOR	Brown with gray and khaki accents	Green, purple and brown	Gray and silver
TEX- TURE	Course with smooth transitions	Sharp to smooth and separate	Course, sharp and blunt

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	See B-1 above	See B-2 above	Incremental addition to existing prominent Lines and towers
LINE			Vertical and horizontal become more Dominant
COLOR			See B-3 above
TEX- TURE	↓	↓	Complex pattern of lattice appears more course and ordered

**SECTION D. CONTRAST RATING    ☐ SHORT TERM    ☒ LONG TERM**

		FEATURES													
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
<b>ELEMENTS</b>	Form				x			x			x			2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> n/a <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)  3. Additional mitigating measures recommended  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reserve side)	
	Line				x			x				x			
	Color				x			x					x		
	Texture				x			x				x			
Evaluator's Names      Date															
Thomas Dildine															
Power Engineers, Inc.															
9/13/03															

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**Section D. (continued)**

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**Comments from item 2.**

**VRM does not apply to non-BLM owned lands**

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**Additional Mitigating Measures (See item 3)**

**Apply visual-4 mitigation measure outlined in Table 4-5 of EA.**

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**VISUAL CONTRAST RATING WORKSHEET**

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

**SECTION A. PROJECT INFORMATION**

<b>1. Project Name</b> Harry Allen – Mead 500kV	<b>4. Location</b> Township _____ Range _____ Section _____	<b>5. Location Sketch</b> see KOP 4 simulation
<b>2. Key Observation Point</b> 4		
<b>3. VRM Class</b> non-BLM land		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

1. LAND/WATER		2. VEGETATION		3. STRUCTURES	
FORM	Flat to gently rolling terrain	LINE	Mounded tufts that form patches	COLOR	Traditional housing to complex and open transmission lines
LINE	Horizontal with some diagonal	COLOR	Horizontal and complimentary to vegetation	TEXTURE	Vertical towers with horizontal conductors and angular construction
COLOR	Brown with gray and khaki accents	TEXTURE	Brown, amber red, with minor green accents		Gray and silver
TEXTURE	Course and clumpy		Course and rough		Course and sharp

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

1. LAND/WATER		2. VEGETATION		3. STRUCTURES	
FORM	See B-1 above	LINE	See B-2 above	COLOR	Incremental change towards complexity
LINE		COLOR		TEXTURE	Pronounced vertical and horizontal presence
COLOR		TEXTURE			See B-3 above
TEXTURE	↓	TEXTURE	↓		See B-3 above

**SECTION D. CONTRAST RATING    ☐ SHORT TERM    ☒ LONG TERM**

DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> n/a <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reserve side)	
Form				x				x				x			
Line				x				x				x			
Color				x				x				x			
Texture				x				x				x			

**Evaluator's Names**      **Date**  
 Thomas Dildine  
 Power Engineers, Inc.  
 9/13/03

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**Section D. (continued)**

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**Comments from item 2.**

**VRM does not apply to non-BLM owned lands**

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**Additional Mitigating Measures (See item 3)**

**Apply visual-4 mitigation measure outlined in Table 4-5 of EA.**

UNITED STATES  
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VISUAL CONTRAST RATING WORKSHEET

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

SECTION A. PROJECT INFORMATION

1. Project Name Harry Allen – Mead 500kV	4. Location	5. Location Sketch see KOP 5 simulation
2. Key Observation Point 5	Township _____	
3. VRM Class III	Range _____	
	Section _____	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	Flat with adjacent foothills	Mounded tufts that form a patchy mosaic	Protruding transmission poles
LINE	Horizontal with topography that frames view	Mimics topography, flat	Vertical poles and non-noticeable horizontal conductors
COLOR	Gray, brown and khaki	Brown, gray, more abundance of green	Attention focusing brown (Corten)
TEXTURE	Crumbly and dry	Course	Course and rough

SECTION C. PROPOSED ACTIVITY DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	See B-1 above	See B-2 above	Open, large lattice towers
LINE			More emphasis added with horizontal conductors
COLOR			Gray and silver contrast with Corten but blend better into surrounding natural colors
TEXTURE	↓	↓	course

SECTION D. CONTRAST RATING    ☐ SHORT TERM    ☒ LONG TERM

DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> n/a <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
ELEMENTS	Form				x			x			x			3. Additional mitigating measures recommended  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reserve side)
	Line				x			x			x			
	Color				x			x				x		
	Texture				x				x			x		
		<div style="display: flex; justify-content: space-between;"> <span>Evaluator's Names Thomas Dildine Power Engineers, Inc. 9/13/03</span> <span>Date</span> </div>												

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Section D. (continued)

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Comments from item 2.

The characteristic landscape would be altered as a result of the proposed action. This alteration however, is not an introduced form or line not already seen throughout the characteristic landscape.

The simulation shows the effectiveness of lattice tower placement in front of complex topography nearby. The topography behind the lattice towers forms a backdrop that makes the structures less visible.

A casual viewer's attention is already drawn and focused to multiple 230 and 345kV corridors nearby.

The proposed action would not be a new element introduced that would be out of context with the surrounding visual condition.

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Additional Mitigating Measures (See item 3)

Apply visual-1, 4, and 5 mitigation measures outlined in Table 4-5 of EA.

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**VISUAL CONTRAST RATING WORKSHEET**

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

**SECTION A. PROJECT INFORMATION**

<b>1. Project Name</b> Harry Allen – Mead 500kV	<b>4. Location</b> Township _____ Range _____ Section _____	<b>5. Location Sketch</b> see KOP 6 simulation
<b>2. Key Observation Point</b> 6		
<b>3. VRM Class</b> non-BLM land		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
<b>FORM</b>	Flat and sloping terrain enclosed by topography nearby	Sparsely covered with mounded tufts. Blotchy	Open lattice towers, closed mass poles, paved freeway
<b>LINE</b>	Horizontal complimented by diagonal topography	Gently curved	Vertical poles and towers, horizontal conductors
<b>COLOR</b>	Gray and brown with red ferrous accents	Olive drab green, khaki brown	Silver and gray with minor brown wood color
<b>TEX- TURE</b>	Fine and course	Soft to somewhat course	Course to smooth

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
<b>FORM</b>	See B-1 above	See B-2 above	Slight increase in open lattice form
<b>LINE</b>			Increased horizontal presence from new double circuit
<b>COLOR</b>			See B-3
<b>TEX- TURE</b>	↓	↓	See B-3

**SECTION D. CONTRAST RATING    ☐ SHORT TERM    ☒ LONG TERM**

<b>DEGREE OF CONTRAST</b>		<b>FEATURES</b>												<b>2. Does project design meet visual resource management objectives?</b> <input checked="" type="checkbox"/> n/a <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		<b>LAND/WATER BODY (1)</b>				<b>VEGETATION (2)</b>				<b>STRUCTURES (3)</b>					<b>3. Additional mitigating measures recommended</b>  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reserve side)
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
<b>ELEMENTS</b>	<b>Form</b>				x			x				x		<b>Evaluator's Names</b> <b>Date</b> Thomas Dildine Power Engineers, Inc. 9/13/03	
	<b>Line</b>				x			x				x			
	<b>Color</b>				x			x				x			
	<b>Texture</b>				x			x				x			

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**Section D. (continued)**

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**Comments from item 2.**  
**VRM not applicable on non-BLM land**

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**Additional Mitigating Measures (See item 3)**

## VISUAL CONTRAST RATING WORKSHEET

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**Section D. (continued)**

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**Comments from item 2.**  
**VRM not applicable on non-BLM land**

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**Additional Mitigating Measures (See item 3)**

**Apply visual-1, 4, and 5 mitigation measures outlined in Table 4-5 of EA.**

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**VISUAL CONTRAST RATING WORKSHEET**

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

**SECTION A. PROJECT INFORMATION**

<b>1. Project Name</b> Harry Allen – Mead 500kV	<b>4. Location</b> Township _____ Range _____ Section _____	<b>5. Location Sketch</b> see KOP 8 simulation
<b>2. Key Observation Point</b> 8		
<b>3. VRM Class</b> non-BLM land		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

1. LAND/WATER		2. VEGETATION		3. STRUCTURES	
FORM	Flat to gently sloping desert	Mounded tufts form simple mosaic		Open lattice towers	
LINE	Horizontal with distant diagonals	Horizontal		Angular lattice construction	
COLOR	Gray, khaki, brown	Brown, amber, accents of green		Gray/silver	
TEX- TURE	Course to fine	Course		Course and sharp	

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

1. LAND/WATER		2. VEGETATION		3. STRUCTURES	
FORM	See B-1 above	See B-2 above		Additional presence of repeated form	
LINE				Additional focus towards angles	
COLOR				See B-3	
TEX- TURE	↓	↓		See B-3	

**SECTION D. CONTRAST RATING**    ☐ SHORT TERM    ☒ LONG TERM

DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> n/a <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
ELEMENTS	Form				x				x				x		3. Additional mitigating measures recommended  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reserve side)
	Line				x				x				x		
	Color				x				x					x	
	Texture				x				x					x	
														Evaluator's Names    Date Thomas Dildine Power Engineers, Inc. 9/13/03	

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**Section D. (continued)**

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**Comments from item 2.**  
**VRM not applicable on non-BLM land**

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**Additional Mitigating Measures (See item 3)**

**Apply visual-1, 4, and 5 mitigation measures outlined in Table 4-5 of EA.**

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**VISUAL CONTRAST RATING WORKSHEET**

Date: 9/13/03
District: Las Vegas
Resource Area Las Vegas Valley
Activity (program) Utility

**SECTION A. PROJECT INFORMATION**

<b>1. Project Name</b> Harry Allen – Mead 500kV	<b>4. Location</b> Township _____ Range _____ Section _____	<b>5. Location Sketch</b> see KOP 9 simulation
<b>2. Key Observation Point</b> 9		
<b>3. VRM Class</b> non-BLM land		

**SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION**

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
<b>FORM</b>	Gently sloping to topographic frame in the distance	Large patchy mosaic formed by mounds	Open lattice towers, paved highway
<b>LINE</b>	Horizontal with distant diagonals	Horizontal with each mound having curves	Angular towers, perpendicular highway
<b>COLOR</b>	Khaki, ferrous red, gray, brown	Khaki, olive drab green	Gray/silver
<b>TEX- TURE</b>	Smooth flats with course diagonals	Course	Course and sharp

**SECTION C. PROPOSED ACTIVITY DESCRIPTION**

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
<b>FORM</b>	See B-1 above	See B-2 above	Somewhat noticeable repeated form
<b>LINE</b>			Incremental addition to vertical and horizontal
<b>COLOR</b>			See B-3
<b>TEX- TURE</b>	↓	↓	See B-3

**SECTION D. CONTRAST RATING    ☐ SHORT TERM    ☒ LONG TERM**

		FEATURES													
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
<b>ELEMENTS</b>	<b>Form</b>				x			x				x		<b>2. Does project design meet visual resource management objectives?</b> <input checked="" type="checkbox"/> n/a <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)  <b>3. Additional mitigating measures recommended</b>  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reserve side)	
	<b>Line</b>				x			x				x			
	<b>Color</b>				x				x				x		
	<b>Texture</b>				x				x				x		
														<b>Evaluator's Names</b> <b>Date</b> Thomas Dildine Power Engineers, Inc. 9/13/03	

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**Section D. (continued)**

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**Comments from item 2.**  
**VRM not applicable on non-BLM land**

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**Additional Mitigating Measures (See item 3)**

**Apply visual-1, 4, and 5 mitigation measures outlined in Table 4-5 of EA.**